MDE Forensic Laboratories

# LABORATORY REPORT

December 22, 2015

**Client:** Tom Meyer
Seattle City light
700 5th Ave
Seattle, WA 98104

**Ref:** DV1611193

**MDE Job #:** 22897
**Job Name:** Ladder Creek Settling Tank

## EVIDENCE

One plastic bag containing a black flakey residue, said to be the burned remnants of an asphalt-based coating on the above referenced steel structure. Specifically, the request was to characterize the residue in preparation for the disassembly and removal of the steel tank.

## PROCEDURES

The residue was examined using polarized light microscopically and analyzed using Fourier Transform infrared spectrometry and energy dispersive x-ray spectroscopy. Potential organic content was extracted and analyzed using gas chromatography mass spectrometry. These methods were sufficient to generally characterize the composition of the residue. Trace composition can be determined in the future if necessary using additional methodologies.

## RESULTS AND CONCLUSIONS

The residue is porous and crumbles readily. The residue consists mostly of carbon with low concentrations of magnesium and silicone. These results are consistent with a charred asphalt which contained some mineral/clay filler. No extractable petroleum-based products were detected in the residue.

When this steel structure is cut up, the individuals doing the cutting and in the immediate vicinity should wear proper personal protective equipment. In addition to eye and body protection consistent with the use of acetylene torches cutting metal, respiratory protection should be utilized. If the individuals already have negative pressure respirators (half or full face), the filter cartridges should be OV – P100 (particulate with added filtration for organic vapors). If they do not utilize negative pressure respirators, the respiratory protection can be disposable masks that are fire retardant, provide protection from airborne particulates and nuisance organic vapors; one such product is 3M model 8514.

Please call if I can be of further assistance in this matter.

Dale C. Mann, F-ABC, CFI
Senior Forensic Chemist

Reviewed by: Susan Evans, CIH, CSP, P.E.